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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/805,337  
Filing Date: March 22, 2004  
Appellant(s): STADELE, NORBERT

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Ronni Jillions  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 4/27/09 appealing from the Office action mailed 11/26/08.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

WO2004/041541A1	ALDEN	5-2004
US 6,491,361	SPANN	12-2002

Art Unit: 1791

US 5,602,746	LOFFLER	2-1997
US 4,587,898	WELSCHLAU	5-1986

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alden(WO 2004/041541A1) in view of Welschlau (US Patent 4,587,898) as evidenced by Spann, and further in view of Loffler(U.S. Patent 5,602,746)

Alden discloses a method of printed corrugated board wherein pre-formed sheets of corrugated board are printed using an ink-jet printer, and cut in accordance with the printed design.(Abstract; Pg. 2, ll. 26-27) The reference does not disclose this process being part of in-line formation the corrugated web. Welschlau discloses forming a corrugated board by printing on a continuous web, joining the web with a corrugated web, and cutting the formed corrugated product.(Figure 1; Col. 6, ll. 4-12) It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the process of Alden inline wherein the corrugated board is formed and then printed and cut since Welschlau discloses forming and cutting a corrugated web in an inline process and since this would allow continuous formation of the product. While Alden does not disclose the printer is a digital printer, Spann is cited to show that an ink jet printer is considered a digital dot matrix printer.(Col. 1, ll. 13-15) Thus the ink jet printer of Alden is considered a digital printing process.

The references cited above do not disclose a method to determine the shrinkage of the corrugated board or a method of determining scaling factors. Loeffler discloses

Art Unit: 1791

printing on a sheet whose outer dimensions can change due to drying or dampening.

The references disclose using sensors to determine the locations of marks on the paper to determine the amount of change in the outer dimensions and to compensate for this change when making the printing form. (Col. 2, ll. 3-6; Col. 3, ll. 48-57; Col. 4, ll. 48-53) The reference does not clearly disclose how this compensation occurs, but one in the art would appreciate that compensating for the change in size of the printed image would require changing the size of the printing. It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the shrinkage or expansion of the corrugated board by placing marks on the board and measuring their spacing downstream using a sensor to determine the change in the image size to modify the printing size upstream so that the final image is the desired size since Loeffler discloses using marks to determine the amount of shrinkage or growth in the web so that the image can be altered to compensate for changes in the size of the printed image. (Col. 2, ll. 3-6; Col. 3, ll. 48-57; Col. 4, ll. 48-53)

Regarding claim 11, Alden discloses printing after forming the corrugated web.

Regarding claim 12, Loeffler discloses marking can be used in the direction of the length and width of the web. (Col. 4, ll. 52-56) One in the art would appreciate that the marking could be in any direction and that placing the marks parallel and perpendicular to the web movement would have been obvious since these are the obvious places to place such marks.

**(10) Response to Argument**

Regarding appellant's argument that one faced with problems printing in an inline process would not have been motivated to look to printing on pre-cut boards, the rejections starts with a pre-cut board, which is then modified to make it continuous.

Regarding appellant's argument that one in the art looking to solve the problems of shrinkage in corrugated board manufacturing would not look to Alden to solve these problems, Alden is not used to show hoe to solve that problem. Alden is used as a primary reference which is modified to make the solving of the problem obvious.

Regarding appellant's argument that Alden does not disclose or recognize any problem with shrinkage, the fact that a reference does not recognize a problem that is recognized elsewhere does not mean that an invention is patentable.

Regarding appellant's argument that Welschlau does not address the concept of scaling factors, Loeffler suggests the modification of the printing based on changes to the paper dimensions.

Regarding appellant's argument that Welschlau does not disclose digital printing, Alden does.

Regarding appellant's argument that Welschlau contains printing forms, etc., Welschlau is cited to show it is known to form corrugated board and print on it, thus suggesting making the corrugated board in Alden and printing on it, not taking the process of Welschlau wholesale into Alden.

Regarding appellant's argument that nothing in Alden discusses the need for forming the corrugated board continuously, the standard is not whether the primary

Art Unit: 1791

reference suggests the secondary reference(or teaches enough that the secondary reference is not even needed), but whether combining the primary reference with the secondary reference is obvious.

Regarding appellant's argument that Welschlau and Alden are from diverse arts, both art directed to printing on corrugated board.

Regarding appellant's argument that examiner has provided no evidence that batch and continuous process are known alternatives to one another, a review of ANY basic chemical engineering beginner text would indicate that the three types of processes are batch, semi-continuous, and continuous. This is part of the basic knowledge of any student of chemical engineering. Additionally, it is well-known in general to either do several steps to one item(batch) or do each step to several different items in a series. For example, before mechanization, one person made a shoe, or an engine in a batch process, i.e. they made it and the something was done with it such as making individual corrugated boards and then printing on them. Now, many things are made in a continuous process where each station or person performs the same task on each article- i.e. manufacturing lines.

Regarding appellant's argument that Alden does not teach how to use digital printing in an inline process, printing in an in-line process would appear to quite obvious since conventional printers associated with computer are digital printers and can print continuously, i.e. banners. Appellant has shown no evidence that one in the art would not known how to use a digital printer in a continuous process.

Regarding appellant's argument that Welshlau uses carrier bands, examiner is not using the printer of Welschlau. Welschlau is used to show the concept of printing in a continuous corrugating process is known.

Regarding appellant's argument that merely because one of ordinary skill would know how to use a digital printer in a continuous process does not mean it would be obvious to do so, that is not what examiner stated. Examiner pointed out that appellant asserted that "there is no teaching as to how one would use digital printing using an ink-jet printer in an inline process".(Response to argument dated 6/23/08, Pg. 4 bottom) Examiner was pointing out that there is no need for a teaching of how to use digital printing in an inline process since digital printers are known to be capable of such as evidenced by banner printing.

Regarding applicant's argument that examiner is replacing the digital printer of Alden with the rotary printer of Welschlau, examiner is using Welschlau to show it is known to form corrugated board and print on it, thus suggesting making the corrugated board in Alden and printing on it, not taking the process of Welschlau wholesale into Alden.

Regarding applicant's argument that using the concept of unroll stands and a corrugated board making apparatus from Welschlau is taking the process wholesale into Alden, examiner is taking the concept of a continuous process of making corrugated web and printing on it from Welschlau and modifying Alden to do the same. Clearly since Alden does not disclose this corrugated board making apparatus, the device used would be used in Alden as it is an obvious choice for the device since it



Art Unit: 1791

already shows a device capable of forming a corrugated board and using it in a printing process.

Regarding appellant's argument that a patent composed of several elements is not proved obvious merely by demonstrating each element was known in the art, KSR also states that combining known prior art elements according to known methods to yield predictable results is a valid rationale. Printing and forming corrugated board are known prior art elements and Welschlau shows a method is known for combining them. It also states a valid rationale is using a known technique(inline printing and corrugating) to improve a similar device(digital printer of Alden) in the same way.

Regarding appellant's argument that making the corrugated board in Alden would render it unsuitable for its intended purpose, the boards of Alden pass from one station to another. The intended purpose of Alden is to print on board moving past it and then cut that board. Making the board continuous does not render the device inoperative, i.e. unusable for the intended purpose.

Regarding appellant's argument that Alden does not use a heater so there would be no shrinkage, appellant's claim does not require a heater, only that a change in size of the image can occur from one step to the next. This can be due to humidity in the room, expansion of the faceboard due to the ink, stretching of the board as it passes through the process as well as the use of a heater and all of these could cause a change in the image size between one step and the next. As to appellant's argument that Alden does not teach this, the fact that a reference does not teach problems with its process does not mean that such problems do not exist.

Art Unit: 1791

Regarding appellant's argument that Loeffler states that the speed of the conveying through the dryer or the temperature is used to reduce the amount of shrinkage, the reference states that when MAKING the printing form, the changes in length and width are compensated for.(Col. 2, ll. 3-6) This therefore occurs when the device is first created and is separate from the minimization of shrinkage processes otherwise performed. It is well within the skill of a knowledgeable artisan to determine how to compensate for the change in print size. This suggests the concept of compensating for changes in the final printed size by changing the size of the printed image is known in the printing arts.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/B. J. M./

Examiner, Art Unit 1791

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Supervisory Patent Examiner, Art Unit 1791

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